

Applicant: Markku Kyytsonen
Application No.: 10/516,572
Art Unit: 3725

Remarks

Claims 9–23 remain pending in the application. Claims 18–20 are withdrawn. In the Office action dated Sep. 22, 2006, the drawings were objected to because the lead line of reference number 4;41 as shown in figure 1 is pointed to the bearing housing instead of the roll, and the disclosure was objected to because of informalities in paragraph 24, line 2. Claims 9-17 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite, claims 9-17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stotz in view of Holopainen.

The invention is directed to controlling distribution of nip loads in different nips of a stack of rolls. This is done by bringing an additional load to the first and/or last roll in the set of rolls. For example, by bringing an additional load to the first roll, nip load in the rolls between the first roll and the fixed intermediate roll will be affected more than the nip loads between fixed intermediate roll and the last roll.

FIG. 1 has been amended to shorten the lead line to the reference number 4;41, as required by the examiner. The specification has been amended as suggested by the examiner. In addition, reference to 31b' and 32b' have been stricken from FIG. 1 and paragraph [0026]. Further the language stricken from paragraph [0026] is clearly seen to be in error and extraneous and contrary to the explanation given in [0022] where the upper and lower rolls are described as “Sym rolls” “conventional in itself” “With the loading devices 31a, 32a ... is also possible to close the roll nips N of the calender and to generate the desired load to the said roll nips.” See attached “profiling Sym Rolls” brochure dated October 2002 for a nearly contemporaneous description Sym rolls.

Claims 9-17, and 21 have been corrected removing definiteness either by taking the examiner's suggestion or as part of distinguishing amendments.

Applicant amended claims are directed to a calender of the type wherein the first and last rolls have internal loading devices for moving the casing of the first and last roll to load the rolls of the calender, and wherein there is an intermediate roll which is rotatable about an axis which is fixed with respect to the frame and lacking in internal devices for loading or

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moving the rolls shell, and at least one additional intermediate roll between each of the fixed intermediate rolls and the first roll and the fixed intermediate roll and the second roll. Said additional intermediate roll also lacking internal devices for loading or moving the roll shells.

The result of this arrangement is a rather simple calendar which utilizes conventional rolls in the calender stack between the first roll in the last roll, but because the mounting of the middle (second) intermediate roll is fixed, the stack can have rather different linear nip loads in the nips above and the nips below fixed middle (second) intermediate roll.

This is explained in paragraph [0011]:

As distinct from the conventional multi-roll calendars, the additional load does not influence the linear load distribution of the roll nips in a uniform or linear way, but the extent of the load in a certain roll nip depends on whether the roll nip in question is located before the fixedly attached intermediate roll or after the intermediate roll as the set of rolls is looked at from the direction of the influencing force.

Stotz is distinguished because middle (second) intermediate roll of Stotz has “[a] major component or part of the inventive apparatus ... a hydraulic ... motor 3 provided in each case between the associated roll surface 1 and its associated roll stand 6.” (col.4 lines 54-64)

Holopainen is distinguished because middle (second) intermediate roll(s) of Holopainen do not meet the limitation of an intermediate roll which is rotatable about an axis which is fixed with respect to the frame and lacking internal devices for loading or moving the rolls shell. Thus the arrangement and advantages disclosed and claimed by applicant are not shown in the applied references.

Support for the claim limitation of claims 9, and 21 “wherein the first, the second, and third intermediate rolls lacking internal devices for loading or moving the rolls shell” comes from FIG. 1 and the negative implication of the following sentence from the abstract “At least the first roll (3; 31) and the last roll (3; 32) have casings which can be moved toward the intermediate rolls (4).” This is not contradicted by the last sentence of paragraph

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[0024] "The middlemost intermediate roll is fixedly attached to the calender frame in a similar way as the uppermost and the lowermost roll. The middlemost intermediate roll is a smooth-surfaced metal roll." Because the sentence is clearly referring to the fixed mounting of the roll not to having a movable casing.

Applicant believes that no new matter has been added by this amendment.

Applicant submits that the claims, as amended, are in condition for allowance.

Favorable action thereon is respectfully solicited.

Respectfully submitted,



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